REMARKS/ARGUMENTS

In the Office Action mailed on August 20, 2007, the Examiner objected to the specification because of certain abbreviations. Applicants amended the specification to provide full explanation of the acronyms. Since the optical materials cited on page 20 of the specification are commonly known in the field, Applicants respectfully submit that: no new matter has been added to the specification.

Examiner rejected claims 3-5 and 8-14 under 35 U.S.C. §112, first paragraph for lack of enablement, and under 35 U.S.C. §112, second paragraph as indefinite.

Examiner further rejected claims 1, 2, 6 and 7 under 35 U.S.C. §103(a) as unpatentable over Ishikawa (USPN 5,760,937) in view of Black (Sonet and T1), and claims 9-12 under 35 U.S.C. §103(a) as unpatentable over Ishikawa and Black in view of Knox (USPN 5,631,758). Claims 3, 4, 8, and 13 rejected under 35 U.S.C. §103(a) as unpatentable over Ishikawa in view of Black and Kumar (USPN 7,027,735).

Applicants appreciate the time and consideration provided by Examiner in reviewing this application, however, respectfully traverse the 103 rejection at least for the following reasons.

Rejection Under 35 U.S.C. §112, first paragraph

According to the present application, the irregular-intervals optical time-division-multiplexed signal generator shown in FIGS. 17 and 18 multiplexes N channels of light pulse trains of repetition frequency f0 into time-division-multiplexed signal. Then, channel intervals of the separated signals of N channels are given irregular intervals respectively. (See specification page 29, lines 7 to 21.)

The irregular-intervals optical time-division-demultiplexing unit shown in FIGs. 19 and 20 demultiplexes the time-division- multiplexed signal into N channels of the light pulse trains of repetition frequency f0. N delay circuits have respectively delay time corresponding to the given irregular intervals. Therefore, the N separate ports are set in the delay time corresponding to each of the channel intervals. Thus, when numbers of

the N channels match with numbers of the output ports, the signals are provided to all the N separate ports. (See specification, page 30, line 16 to page 32, line 5)

The irregular-intervals optical time-division-multiplexed signal has a repetition frequency component f0. Since the pulse train of same irregular intervals is repeated in the period of 1/f0, it is clear that the frequency component f0 can be extracted by ordinary timing extraction technique. The light pulse train of repetition frequency f0 can be generated as long as the frequency component f0 can be timing-extracted. Thus, each N channel can be separated by the irregular intervals optical time-division demultiplexing unit as shown in FIG. 17.

Rejection Under 35 U.S.C. §112, second paragraph

By this Amendment Applicants amend claims 3 and 8 to clarify the subject matter of the invention. In making these revisions, care has been taken to ensure that the claims remain supported by the specification. The amendment is supported by English specification, page 30, lines 16 to 24, and Fig. 19.

Rejection Under 35 U.S.C. §103

According to MPEP §706.02(j):

"To establish a *prima facie* case of obviousness... the prior art reference (or references when combined) must teach or suggest all claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure.

Black discloses ordinary frame formats for conventional electrical time-division multiplexing system. The frame of the electrical time-division multiplexing system has a control bit as illustrated in Figure 4-2 (a). Consequently, each channel can be easily separated and identified after synchronization to frame using the control bit. The control bit is added to N channel, signal bit rate of multiplexed signals result in $N \cdot f0 + \Delta f$, where basic bit rate is f0.

On the other hand, in the optical time-division multiplexing system, N signal lights are multiplexed only. Signal bit rate of multiplexed signals becomes N · f0. Therefore, a frame format with an additional control bit cannot be generated, and synchronization to frame cannot be performed. Accordingly, in the optical time-division multiplexing system, such as disclosed by Black, channel separation and identification could not be accomplished as in the conventional electrical time-division multiplexing system.

In contrast, the present invention can realize channel separation and identification without using any control bits or synchronization to frame.

In the optical demultiplexers of Ishikawa, all of the channel numbers of the optical signals are extracted by the line identification data extraction circuits. On the other hand, in a time-division-multiplexed light signal channel extraction apparatus of the present invention, the channel extraction unit only identifies the channel of separate port-1 of the optical time-division-multiplexing unit. (See embodiment 1). The other ports are uniquely related to individual channels on the one-to-one relations between the port number of the optical time-division-multiplexing unit and the channel number.

Knox and Kumar neither disclose nor suggest that all the channels are identified by recognizing one channel and that all the ports provide output signals at the same time using irregular-intervals optical time-division-multiplexed signal.

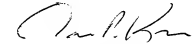
Thus, none of the cited prior art references, alone or in combination teach or suggest the time-division-multiplexed light signal channel extraction method and apparatus as claimed in claims 1 though 14 of the present application.

Therefore, the Applicants believe that the present invention is not obvious from the prior art, and respectfully request reconsideration of rejection of claims 1-14 as originally filed and amended by this response.

The Commissioner is hereby authorized to charge any other fees which may be required in this communication under 37 C.F.R. §§1.16-1.17 to Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY



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